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AUTHOR Lagana, Joseph F.
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ABSTRACT

The purpose of this research investigations was to determine whether a student daily schedule and school calendar could be designed to maximize the future utilization of existing facilities in the North Allegheny School District and to determine if the implementation of such designs would be financially feasible as an alternative to new construction. The report provides assumptions underlying the research, describes alternative extended school year plans considered by the district -- a quarter plan, a trimester plan, and the Act 80-Gemini 220 plan. The Gemini plan, which was chosen by the researchers as superior to the other alternatives, employs a twin daily student schedule for two separate groups of students within the framework of a 220-day school calendar. The research findings reveal in part that some extended school designs (schedules and calendars) have the potential of maximizing the use of existing educational facilities, the only feasible year-round school plans yet developed involve all pupils attending school for an extended school year and the acceleration of pupils to reduce enrollment, and the extended school year concept will not solve a district's building problems unless the district is static or growing slowly enough to constitute no problem. (Author/JF)

ED 079430

A FEASIBILITY STUDY

GEMINI 220
AN EXTENDED SCHOOL DAY
AND SCHOOL CALENDAR
AS AN
ALTERNATIVE
TO NEW CONSTRUCTION

NORTH ALLEGHENY SCHOOL DISTRICT

200 Hillvue Lane

Pittsburgh, Pennsylvania 15237

November, 1969

EA 005 210

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November 18, 1969

MEMBERS OF THE NORTH ALLEGHENY BOARD OF EDUCATION

Submitted herewith is the written report prepared by Dr. Joseph F. Lagana with the counsel of the administrative staff relative to the extended school day and school calendar as an alternative to new construction. A high quality of professional experience, training, judgment and consultative service has been brought to bear on the problems involved in this study. We feel sure that you will be interested in and assisted by the data which have been developed and by the interpretations given.

The major concern in this study ever present in the minds of the researcher and the administrative staff has been to present the most accurate picture possible of the cost pertinent to the courses of action which are open to you. This deep concern rests on the commitment of the Board of Education and the administrative staff in providing the highest quality of education which the North Allegheny School District can financially support.

It is hoped that the findings, conclusions and recommendations based on five months of intensive research presented herein are factually sufficient to facilitate the Board in rendering the most provident and prudent decision regarding the direction of the North Allegheny secondary schools for the ensuing years.

Grateful acknowledgment is extended to the Department of Education and the office of the Allegheny County Schools for their service and counsel; and to the entire North Allegheny administrative staff for their untiring efforts in the designing, development and completion of this exhaustive study.

Respectfully,

C. A. Newman

C. A. Newman
Supervising Principal

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I. INTRODUCTION

Over the past decade the cost of supporting the public schools in all school districts has rapidly increased. In this respect, the North Allegheny School District is no exception. With the constantly increasing student enrollment, the soaring costs of construction at a rate of 1 per cent each month, and the necessity of expanding the professional and non-professional personnel to staff school buildings, there appears to be little relief in sight for the future. It has become increasingly difficult to provide and maintain the necessary school facilities within the existing taxation framework.

Projection of future population growth, proposed housing developments, completion of Interstate Highway 79, paucity of funds, and the changing state of parochial schools has warned us that the trend towards expansion is inevitable. Further compounding long range development plans is the 70 per cent of undeveloped land which comprises the North Allegheny School District. Speculating on rate of growth and costs of the educational programs of the future is most tedious and difficult. It is estimated that the building program alone in North Allegheny will require an additional eighteen to twenty-five mills in real estate taxation over the next decade. As a result of these concerns the North Allegheny School District embarked upon an extensive research investigation to determine the most efficient means of utilizing existing physical, financial and human resources and to determine the economic feasibility of implementing a daily schedule and calendar which would eliminate or minimize secondary school construction during the next decade.

A. Statement of the Problem

The purpose of this research was twofold. First, it explored certain student and employee daily schedules and school calendars which showed promise of maximizing the utilization of existing facilities in the North Allegheny School District for the years ahead. Second, it determined the financial feasibility of implementing daily schedules and calendars which depart from the traditional.

B. Background of the Problem

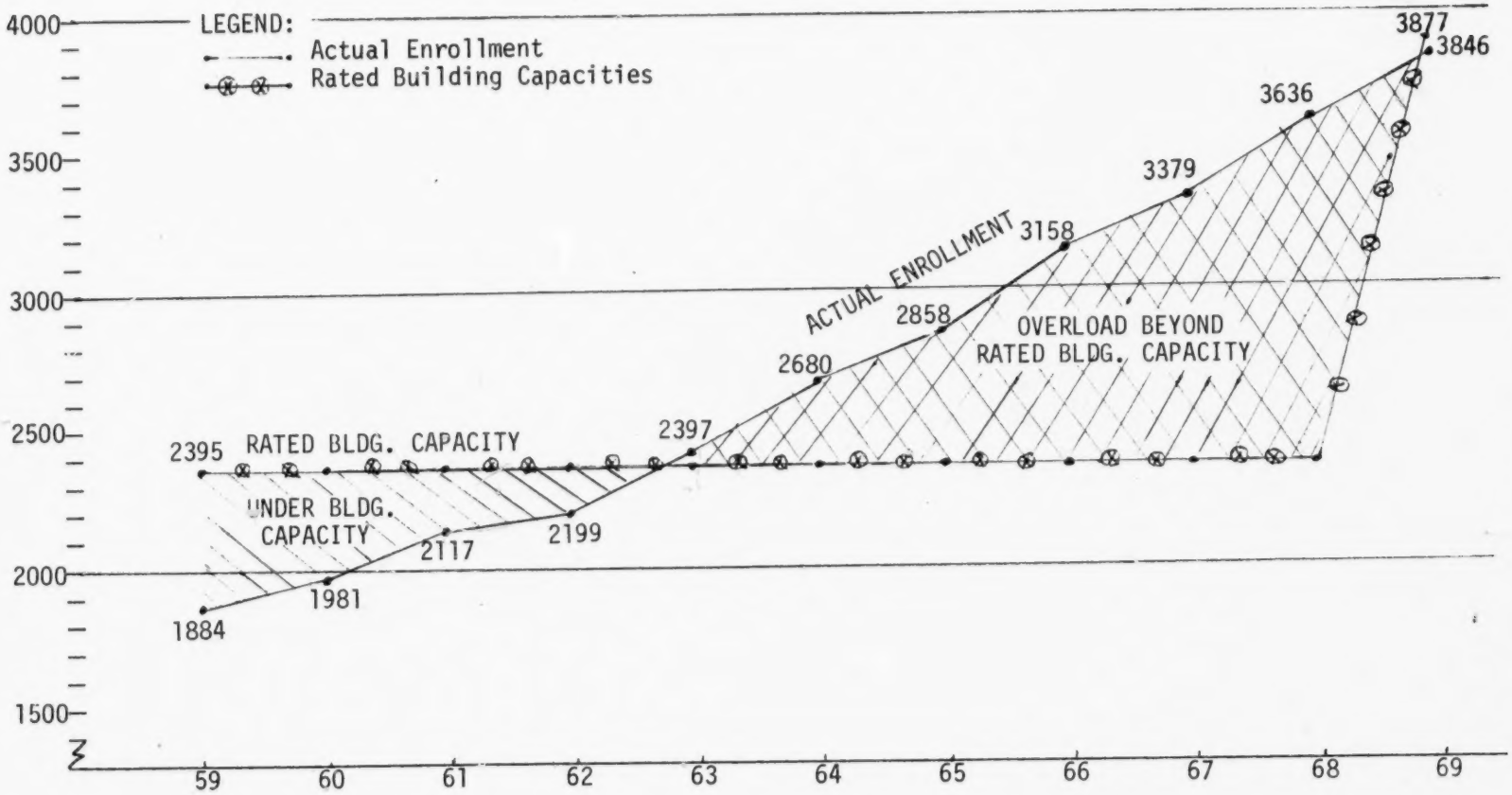
Student enrollment in the North Allegheny School District has increased at an average rate of 6 per cent annually during the past decade. The increase in student enrollment has been felt in all grade levels at the rate of 4.54 per cent in the elementary schools and 7.42 per cent in the secondary schools. The North Allegheny Board of Education has approved the construction of a six room addition to the existing Bradford Woods Elementary School and a new eighteen room elementary school to meet the expansion of student enrollment at the elementary level. However, a concern of the Board of Education and of this research then became the enrollment growth at the secondary level.

A summary of past enrollment at the secondary level is reported on Figure 1.

A study of past secondary enrollments reveal that student enrollment growth has exceeded the rate of new construction. The North Allegheny Senior High School was placed on half day and staggered schedules as the new Carson Intermediate High School was being completed. The Ingomar Middle School is currently housing 1,307 seventh and eighth grade students in a facility which was constructed for 955 students.

FIGURE 1

A COMPARISON OF PAST SECONDARY STUDENT ENROLLMENTS WITH
RATED BUILDING CAPACITIES, 1959 TO 1969



*Carson Intermediate School opened in the spring of 1969 and 5 relocatable classrooms erected (At Ingomar Middle School) in the summer of 1969, increased Rated Bldg. Capacity to 3877

Figure 2 reveals the need for new secondary construction or a means of maximizing the utilization of existing facilities. According to the projected enrollment figures on Figure 2, the secondary schools will have an overload of 302 students in the 1970-71 school year. The expected overload escalates to 1,826 students in the 1977-78 school year. The projected enrollment compelled the North Allegheny School Board to render a decision regarding the immediate construction of a new secondary unit or the implementation of an alternative that would accommodate the increase in student enrollment at the secondary level in the decade ahead.

C. Assumptions Underlying Research

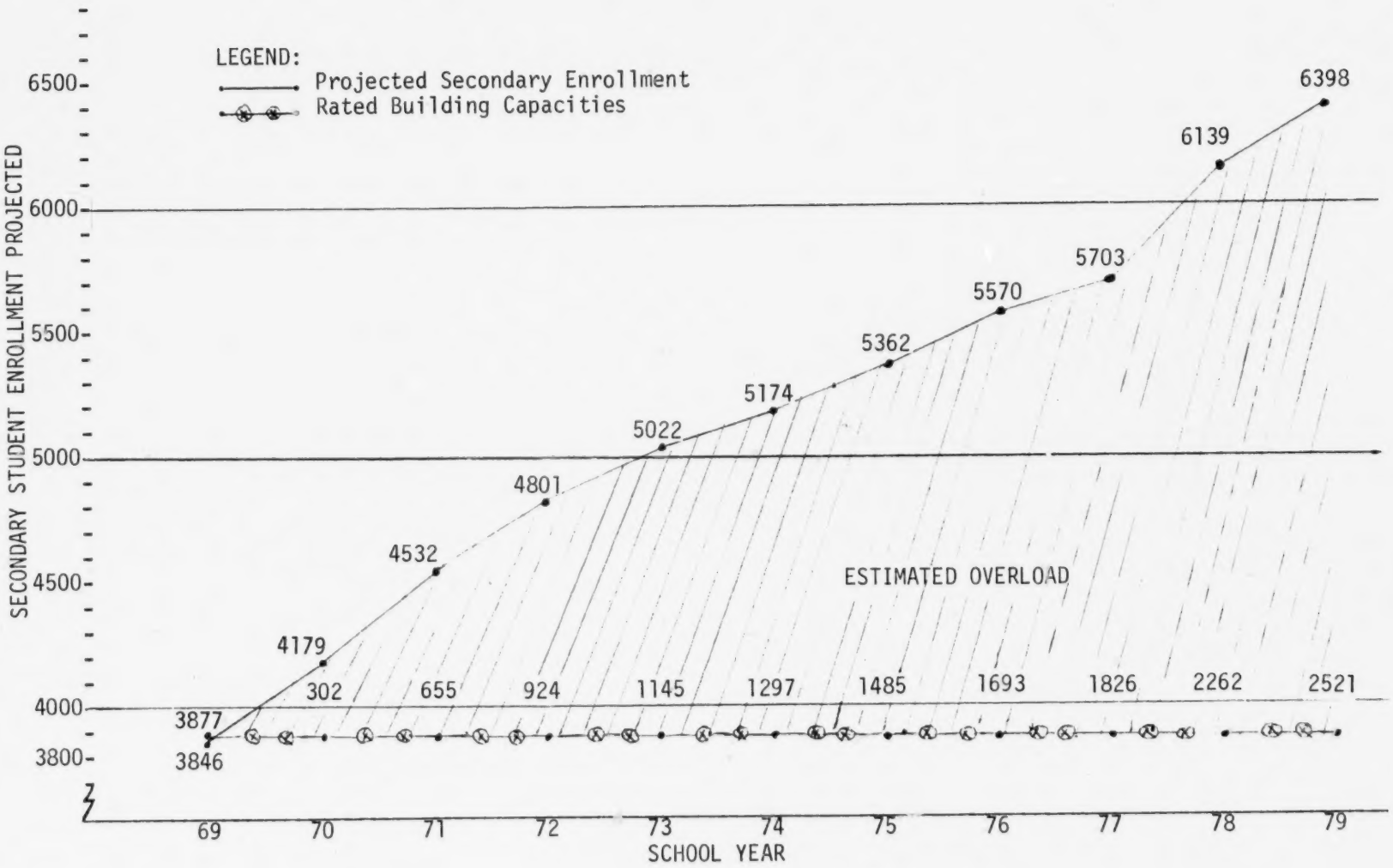
In formulating the plan for this investigation, the following assumptions were made:

1. General Assumptions

The North Allegheny School District is continuously concerned with the improvement of the quality of education for all youth. However, the interest in the extended school day and/or calendar rests on the concern to maximize the use of existing facilities and as an alternative to new construction. In the extended school day and/or calendar designs given consideration in this study, all avenues were cleared for the improvement of the educational enterprise. No provisions, however, were incorporated into the projected costs and expenses which would reflect major curriculum changes or innovations. If the Board of Education would see fit to adopt any of the extended school day and/or calendar designs herein considered, certain curriculum revisions would undoubtedly be adopted with the implementation of the design, but the cost for those curriculum changes was not included in this phase of research.

FIGURE 2

A COMPARISON OF PROJECTED SECONDARY STUDENT ENROLLMENTS
WITH RATED BUILDING CAPACITIES, 1969-1979



The costs and expenses included herein were solely those which were related to the extension of the school day and/or calendar.

2. Specific Assumptions

a. The extended school day and/or calendar concept would be implemented in the North Allegheny School District at the Ingomar Middle School and Carson Intermediate School in 1971-72. By 1973-74, all secondary students (grades 7-12) would be on the extended school day and/or calendar.

b. Professional and non-professional personnel would be receptive to an extended school day and/or calendar concept and accept a prorated per diem salary to supplement their current salaries.

c. Parents would be able to synchronize their vacations and adjust their living patterns to the extended school day and/or calendar.

d. The extended school day and/or calendar concept would necessitate increases in costs and expenses in those areas which follow:

(1) Prorated personnel salaries and additional staff to provide complete services for the extended school day and/or calendar.

(2) Increased wear and tear of buildings and equipment due to longer use; hence, somewhat greater cost for maintenance.

(3) Increased use of buildings would reduce normal time for housecleaning and therefore would require a re-arrangement of housecleaning operations and duties.

(4) The three secondary buildings would have to be completely air conditioned for their proposed use in the spring and summer months.

(5) Costs would increase due to the additional energy for all utilities which would be required for the longer school day and year.

(6) Transportation routes would run substantially the same, but additional cost would be incurred for the longer school year and the complex activity program which might be scheduled at midday. Many part time bus drivers would have to be placed on full time schedules and would be eligible for a proportional increase in salary and all fringe benefits. Thus, an increase in fixed charges.

e. In the consideration of new construction, the effective interest rates and length of rental would reflect the sales price of recent bond issues and the past pattern of rental payments employed by the North Allegheny School District. Specifically, bond counsel suggested for this research a 7 per cent interest rate and thirty-four equal annual payments. (Appendix C).

f. The new construction would be for 1900 eleventh and twelfth grade students.

g. The construction would be completed by 1973.

h. New construction would cost $10,000,000, excluding personnel.

i. An historical analysis of past operational budgets reveals an annual increase of 10 per cent in current expense costs. Thus, it seemed reasonable to assume this trend in all projected costs and expenses.

With these basic assumptions and/or considerations in mind, the researcher and administrative staff made their estimates of the added total and per pupil costs for the extended school day and/or calendar and the cost comparison of providing new construction for 1900 secondary students.

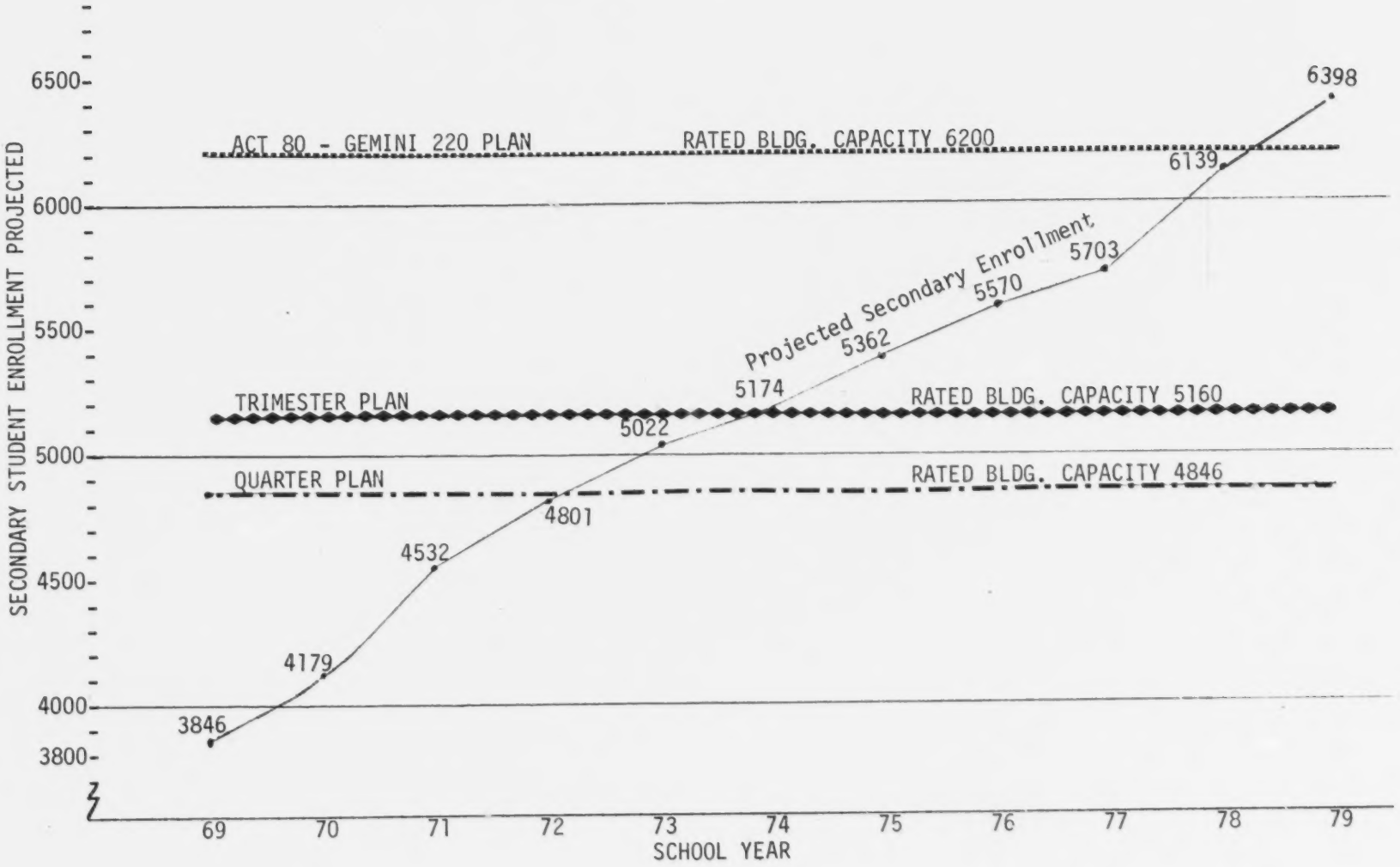
D. Proposed Alternatives

After reviewing ninety articles in the educational literature and conferring with officials from the State Department of Education, the Office of the Allegheny County Schools, professors from the University of Pittsburgh, and the North Allegheny Board of Education and administrative staff, the following were explored as possible alternatives to new construction as prescribed by the Long Range Development Program of 1968: The staggered quarter plan, the staggered trimester plan, and Act 80 - The Gemini Plan.

A comparison of building capacities under the three proposed alternatives is presented in Figure 3.

FIGURE 3

COMPARISONS OF PROJECTED SECONDARY STUDENT ENROLLMENTS 1969-1979
WITH CAPACITIES OF PROPOSED ALTERNATIVE TO NEW CONSTRUCTION



It can be noted that the quarter plan would expand the use of existing facilities by 25 per cent, from a building capacity for all secondary schools of 3,877 to a total enrollment of 4,846. This would appear to meet the projected secondary enrollment until 1972-73, at which time additional secondary school construction would be necessary for the expected enrollment of 5,022 in 1973-74.

The trimester plan would provide a 33 per cent increase in building utilization or a student enrollment of 5,160 which is projected for 1973-74.

Finally, Act 80, Gemini 220, presents the greatest potential of providing for expected enrollment increases. The Gemini Plan would provide 60 per cent greater utilization of existing secondary units and would meet the needs of expanding enrollments until the end of the seventies. The 60 per cent increased utilization of existing facilities under the Gemini Plan was established as a maximum potential due to the basic daily schedule which embraces a complete activity program at midday. Eventually, at the intermediate and terminal grades the extra-curricular activities and inter-scholastic athletic programs would compete with the academic program for student space and thus make the concept educationally undesirable.

In sum, the three proposed alternatives permit greater use of school buildings, but none of the alternatives offers a permanent solution to the soaring student enrollment of the future. Due to the rapid increase in student enrollment, the quarter and trimester plans are not operable beyond 1975. Thus, they were eliminated from further consideration in this study. Both plans would necessitate a complete alteration in living patterns for students, parents and professional employees of

the district, and at best would only be stopgap measures to school construction. In support of this assumption, Bullock[1] maintains:

> A staggered school attendance would be a disruptive influence on students, teachers, and family life. Major changes in school inevitably effect the fundamental life pattern of a society. Any society and its institutions are inextricably intertwined, change at any point forces reciprocal change in other aspects of the culture.

In the educational literature, James[2], Sessions[3], Thomas[4], Martin[5], the Pennsylvania Department of Education[6], Crenshaw[7], White[8], West and MacRae[9], Schoenfeld and Schmitz[10], Weeks[11], National Education Association[12], McLain[13], Goldhammer and Hines[14], and Vause[15], warn of the false economy of the extended school year concepts which are implemented for the sole purposes of economizing and maximizing the use of facilities.

In addition, the trimester plan could not be implemented without legislative action regarding the minimum number of days each pupil must spend in school annually.

Therefore, the application of Act 80, Gemini 220, emerged as the most logical alternative for in-depth research.

The remainder of this report is organized into three sections. Section II deals with the definition of the Gemini concept and the estimated expenses of initiating such a program. Section III contains an expense analysis for the current educational program and a comparison with the estimated expenses of the Gemini program. The conclusions and recommendations are set forth in Section IV.

II ACT 80, GEMINI 220, AS AN ALTERNATIVE TO NEW SCHOOL CONSTRUCTION

The previous section described the general framework and rationale underlying this study. The objectives of this section are to define the Gemini concept and report the estimated expenses which would be expected if the concept were to be initiated in the North Allegheny School District.

On July 30, 1969, Governor Raymond P. Shafer signed into law Act 80 which amended Section 1504 of the School Code of Pennsylvania. The amendment provides:

> Upon request of a board of school directors for an exception to the aforesaid daily schedule, the Superintendent of Public Instruction may when in his opinion a meritorious educational program warrants, approve a school week containing a minimum of twenty seven and one half hours of instruction as the equivalent of five (5) school days or a school year containing a minimum of 990 hours of instruction as the equivalent of one hundred eighty (180) school days.[16]

In interpreting Act 80, Dr. B. Anton Hess states, "this amendment applies to secondary schools (grades 7 - 12) for 990 hours of instruction and to elementary (grades 1 - 6) for 900 hours of instruction."[17]

From the basic intent of the Act to provide a Board of Education with flexibility for developing a school calendar to provide better scheduling of in-service programs, parental conferences, etc., which cannot be considered instructional time, the vestiges of the year-round school concept emerged. Likewise, Act 80 enables school districts to

consider its adoption for the purpose of delaying or avoiding construction of expensive buildings in the near future. For the latter reason the North Allegheny School District explored Act 80 as a possible solution to meeting the objective of its intensive investigation.

A. Defining Gemini 220

The North Allegheny School District's plan which embraced Act 80 as a tentative solution to the stated problem has been labeled the Gemini Proposal and will henceforth be identified as such. The name Gemini (Latin derivation meaning "twin") was derived from the stellular constellation which contains twin celestial bodies. The Gemini Proposal in the North Allegheny School District as explained below purports to employ a twin daily student schedule for two separate groups of students within the framework of a 220 day school calendar. Hopefully, the Gemini label would preclude references of "half-day schedule" or "double schedule", both of which have negative connotations and implications of an emergency situation. The length of the Gemini school calendar was set at 220 days. A shorter school calendar would lengthen each school day to a point which would necessitate some students boarding buses as early as 6:00 A.M. to attend the A.M. session and some students arriving at home as late as 7:00 P.M. from the afternoon session. A longer school calendar (230 or 240 days) would reduce the length of summer vacation for all persons involved to less than ten days. Thus, the 220 day school calendar seemingly provided the most reasonable school arrival and dismissal time and summer vacation.

The keynote of the Gemini plan is a flexibility which permits a departure from the concept of the traditional school in several ways.

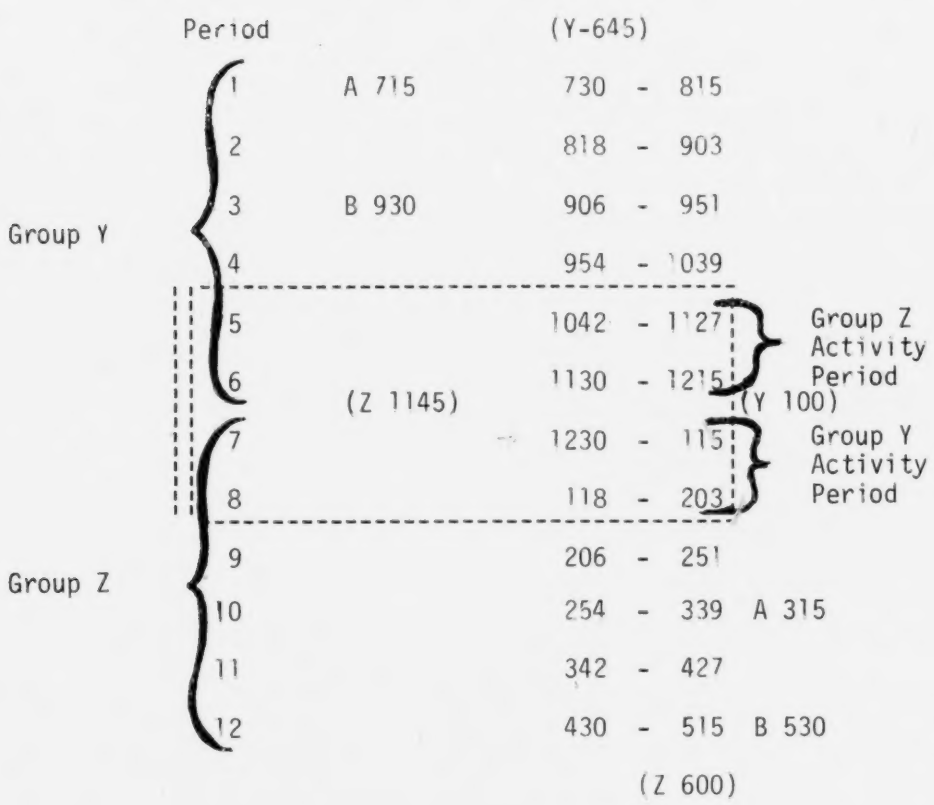
For example, it features four class meetings per week (forty-five minutes each in length) in each academic subject as opposed to the traditional five class meetings per week in each subject. Henceforth, it enables classroom teachers to have the responsibility for six sections of students, but would not exceed the five instructional periods per day currently taught.

The Gemini plan consists of a twelve period day (forty-five minutes per period) and provides a twin curricular program one of which each student attends. A student is assigned to one of the two groups which we will designate from here on in as Group Y or Group Z. The curricular program for each group spans a minimum of six regular instructional periods daily with opportunities for two additional periods for activities. Figure 4 below entitled "Sample Bell Schedule for Gemini 220" illustrates the basic structure of the Gemini program which includes 220 days for each student and meets the requirements of 990 instructional hours per year as prescribed in Act 80.

Half of the secondary school population from each respective building would be assigned to Group Y and the other half assigned to Group Z. Group Y would arrive at approximately 7:30 A.M. and continue through the program until 12:15 P.M. at which time the entire group, except for those who would be involved in activities, would be dismissed. Approximately fifteen minutes later, Group Z would then convene their regular school day at 12:30 P.M. and terminate at 5:15 P.M. As Figure 4 indicates, the professional staff would likewise be separated into two separate shifts. Shift A would begin their services at 7:15 A.M., approximately fifteen minutes before the school day, and would continue through the middle of the tenth period. They would terminate their

FIGURE 4

Gemini 220
A Sample Bell Schedule



LEGEND:

A - Professional Staff - Early Shift
B - Professional Staff - Late Shift
Y 645 - Students Boarding Busses for Group Y
Y 100 - Students Arriving at Home From Group Y
Z 1145 - Students Boarding Busses for Group Z
Z 600 - Students Arriving at Home from Group Z
Group Y would contain 1/2 of the student population which would attend the traditional school day
Group Z would contain the remaining 1/2 of the student population which would attend the traditional school day

services at approximately 3:15 P.M. which would give an eight hour day, including a forty-five minute lunch period. Group B would begin at 9:30 A.M. and would continue through until 5:30 P.M., again completing an eight hour day.

B. Aspects of Gemini 220

The favorable, questionable, and unfavorable aspects of Gemini 220 are presented in Figure 5 which follows. This was done in an attempt to weigh the positive and negative factors which were observed in the preliminary investigation of the Gemini Concept. The center column labeled "Questionable Aspects" has been included at this point because no empirical evidence was available to discern whether the item properly belonged with the favorable or unfavorable group. These were items that were listed for further research. It was anticipated that it would be necessary to poll students, residents, and the employees of the district in order to ascertain a more objective analysis of the feelings of all persons involved toward an extended school day and/or calendar. A rough draft of a questionnaire had been prepared for each respective group and would be disseminated if further evidence were needed in a decision-making process. (Results of a pilot study using these questionnaires are given in appendix A.)

C. Estimating the Expenses for the Operation of School Under the Gemini Concept

Assuming quality and breadth of educational opportunity are held constant, the cost of education is primarily a function of: (1) variations in the total number of pupils to be educated during any one year, and (2) variations in the pupil-teacher ratio up to the maximum number of

FIGURE 5

ASPECTS OF GEMINI 220

FAVORABLE	QUESTIONABLE	UNFAVORABLE
Provides up to 60 per cent greater utilization of existing school facilities	Quality of educational experience	Increased costs and expenses for personnel, services and materials
	Reaction from:	
Lends itself well to flexible and modular scheduling	Students Community Employees	Lose advantage of additional building for student and community use.
Opportunity for educators to expand their earning potentials	Food Services	No experience factor relative to GEMINI to determine other aspects and problems
		Mandated school calendar and schedules

pupils which a teacher can teach without a loss in the quality of education. Costs include expenditures for current expenses plus expenditures for capital outlay from revenue receipts and debt service on indebtedness incurred for capital outlay expenditures.

It is obvious that a reduction in the total number of pupils to be educated during any one year would result in a reduction of current expenses. It would also result in a reduction of capital outlay needs. It would seem, however, that the total number of pupils to be educated is a factor over which the Board of Education would have no control because the Board would have to admit to the public schools all pupils of school age who desire to attend. However, if a Board of Education would extend the school day and the school calendar, thereby reducing its enrollment by 50 per cent in each of two daily sessions, it would theoretically maximize the utilization of existing facilities at minimal cost and retard construction of new buildings. It was the plan of this study to determine the additional total cost and the per pupil cost of the Gemini 220 program by analyzing the major budget classifications. Based on the per pupil cost for 1969-70 as determined from the 1969-70 Operational Budget, the following seven budget classifications were studied after careful consideration of all classifications: (1) Instruction, (2) Pupil Personnel Services, (3) Health Services, (4) Pupil Transportation Services, (5) Operation and Maintenance of Plant, (6) Fixed Charges, and (7) Debt Service. The other budget classifications were eliminated from further study because they did not appear to be influenced by the implementation of Gemini 220. All figures used were for the year 1969-70 and the per pupil expenditures used are the expenditures budgeted for that year along with figures obtained from the payroll printout for October 1969. The estimated additional total

costs and the per pupil costs for the Gemini Program operation were based on the budget amounts since the study occurred in the middle of the fiscal year. Experience in the North Allegheny School District indicates, however, that the actual expenditures in each budget class do not vary greatly from the budgeted amounts; hence, the comparisons made and the conclusions drawn will not be significantly altered.

It was impossible to make accurate dollar estimates of school expenditures for the Gemini Program. Such factors as increases in school enrollment, the declining purchasing power of the dollar, increases in salary given by the Board to teachers and other employees in future years, changes in the school curriculum and other factors will all affect future school expenditures. It was impossible to make accurate estimates of the effect on school expenditures of all of these factors. However, it was possible to make reasonably accurate estimates of school expenditures if it is assumed that all of these factors will have an equal effect on both operational plans under consideration, the Gemini Plan and the current operational plan. While this assumption may not be completely accurate, it is not so far out of line with reality as to substantially affect the validity of the estimates. Using this assumption, it is possible to derive estimates of the per cent variations from the present plan of school operation of school expenditures for the Gemini Program. After completing the total cost comparisons and percentage differences between the current educational program and the proposed Gemini Program, the total costs were analyzed according to classification and student enrollment. The total cost per pupil increase beyond the current expenditures is reported in Figure 6. It can be noted that the total cost per pupil increase was $221 beyond the cost for the regular program for each pupil.

FIGURE 6

GEMINI TOTAL COST PER PUPIL INCREASE BEYOND CURRENT EXPENSES
FOR REGULAR SCHOOL PROGRAM (185 DAYS) BY BUDGET CLASSIFICATION
FOR 1969-1970 AT INGOMAR AND CARSON

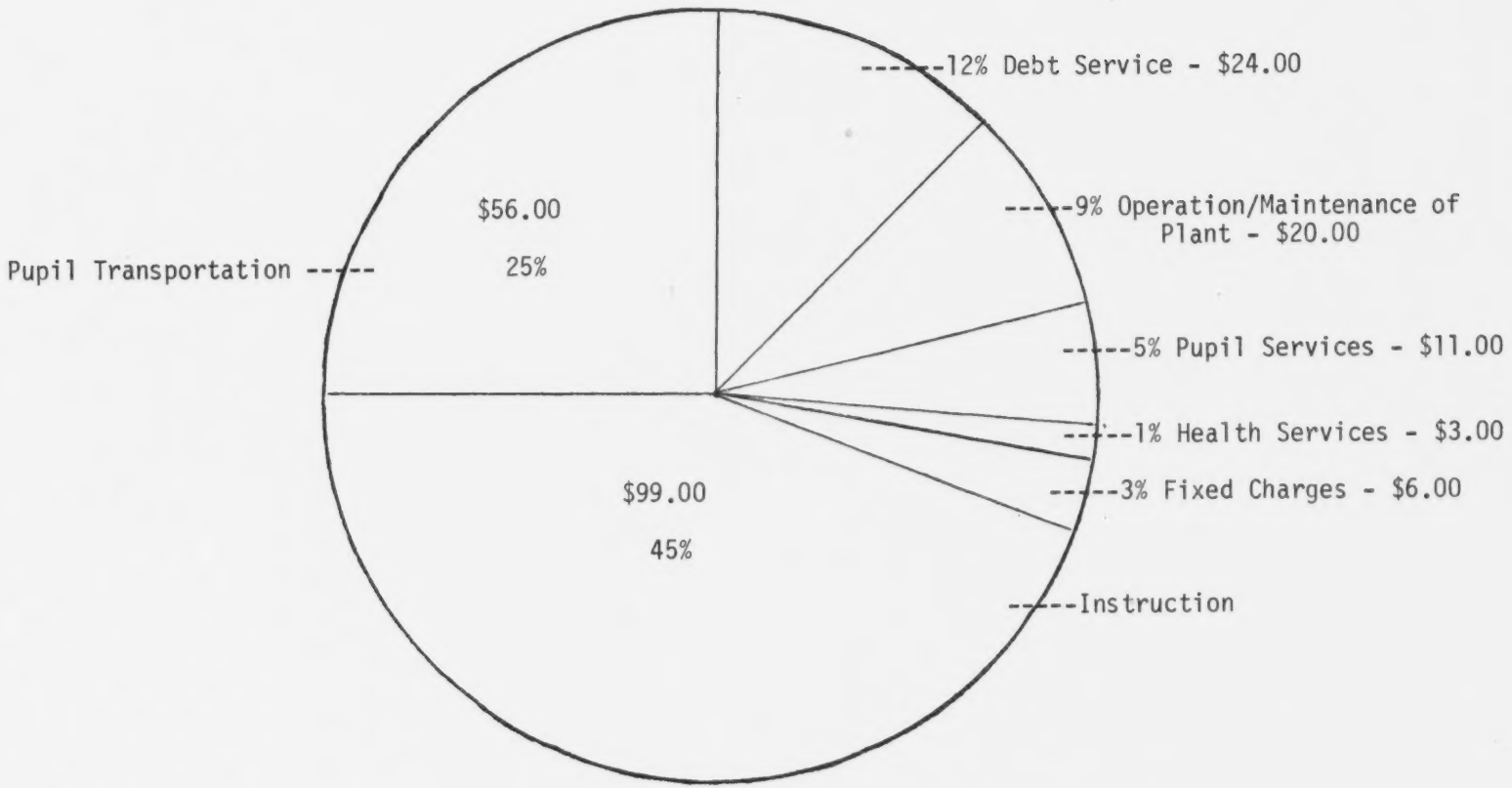
CLASSIFICATION		TOTAL COST DIFFERENCE GEMINI - INGOMAR AND CARSON	COST PER PUPIL INCREASE
0200	INSTRUCTION	$ 259,790	$ 99.00
0300	PUPIL PERSONNEL SERVICES	29,881	11.00
0400	HEALTH SERVICES	10,267	3.00
0500	PUPIL TRANSPORTATION SERVICES	147,776	56.00
0600	OPERATION/MAINTENANCE OF PLANT	50,392	20.00
0800	FIXED CHARGES	16,794	6.00
1300	DEBT SERVICE	60,658	24.00
	TOTAL	$ 575,558	$ 221.00

This total cost difference per pupil of $221 for the Gemini Program was further analyzed by per cent and dollar value and is reported in Figure 7 Forty-five per cent of the additional cost per pupil was for the cost of instruction which included the salaries of classroom teachers for the additional thirty-five days and the total extension of the school day by three hours. Twenty-five per cent of the increase cost per pupil was for pupil transportation. This cost resulted from the necessity of placing many of the part-time bus drivers on full-time employment and likewise increasing the fixed charges, for fringe benefits, social security, etc., by 3 per cent as indicated in Figure 7 The bus drivers had to be placed on full-time employment due to the inherent structure of the Gemini Concept which provides for an extensive activity program at midday. The activity concept necessitates four separate transportation routes during the eleven hour school day. Twelve per cent for debt service was for the purpose of air conditioning all three secondary units. The debt service was placed on a thirty-four year authority rental at an annual interest rate of 7 per cent.

The current expense cost per pupil for the North Allegheny School District for 1969-70 is $710. The Gemini cost per pupil was estimated to be $931. These costs per pupil were projected over the next ten years. The projected costs were based on historical research which was conducted on the past eight operational budgets. The operational budget increased at an average rate of 10 per cent annually over each preceding operational budget. The projections were made on the assumption that student enrollment will continue to increase and an expansion of all services will be necessary to maintain the status quo in the quality of education. Therefore, it seemed reasonable to assume that the

FIGURE 7

AN ANALYSIS OF THE $221 COST PER PUPIL BEYOND THE REGULAR SCHOOL EXPENSES FOR GEMINI 220



historical 10 per cent increase would continue throughout the years ahead, providing that no major curriculum innovations were developed. Any curriculum innovations would, in all probability, escalate the costs beyond 10 per cent annually. A summary of the projected comparisons between the current expense cost per pupil and costs per pupil under the Gemini Program is reported in Figure 8. It should be noted that although the current expense cost per pupil and the Gemini cost per pupil are being projected at a rate of 10 per cent annually, the cost per pupil difference for Gemini varies at a different per cent each year henceforth. This variance can be explained by the number of projected students for each year which would have been divided into the total costs for the current expenses and total costs for Gemini, thus resulting in a different cost per pupil difference for Gemini each year.

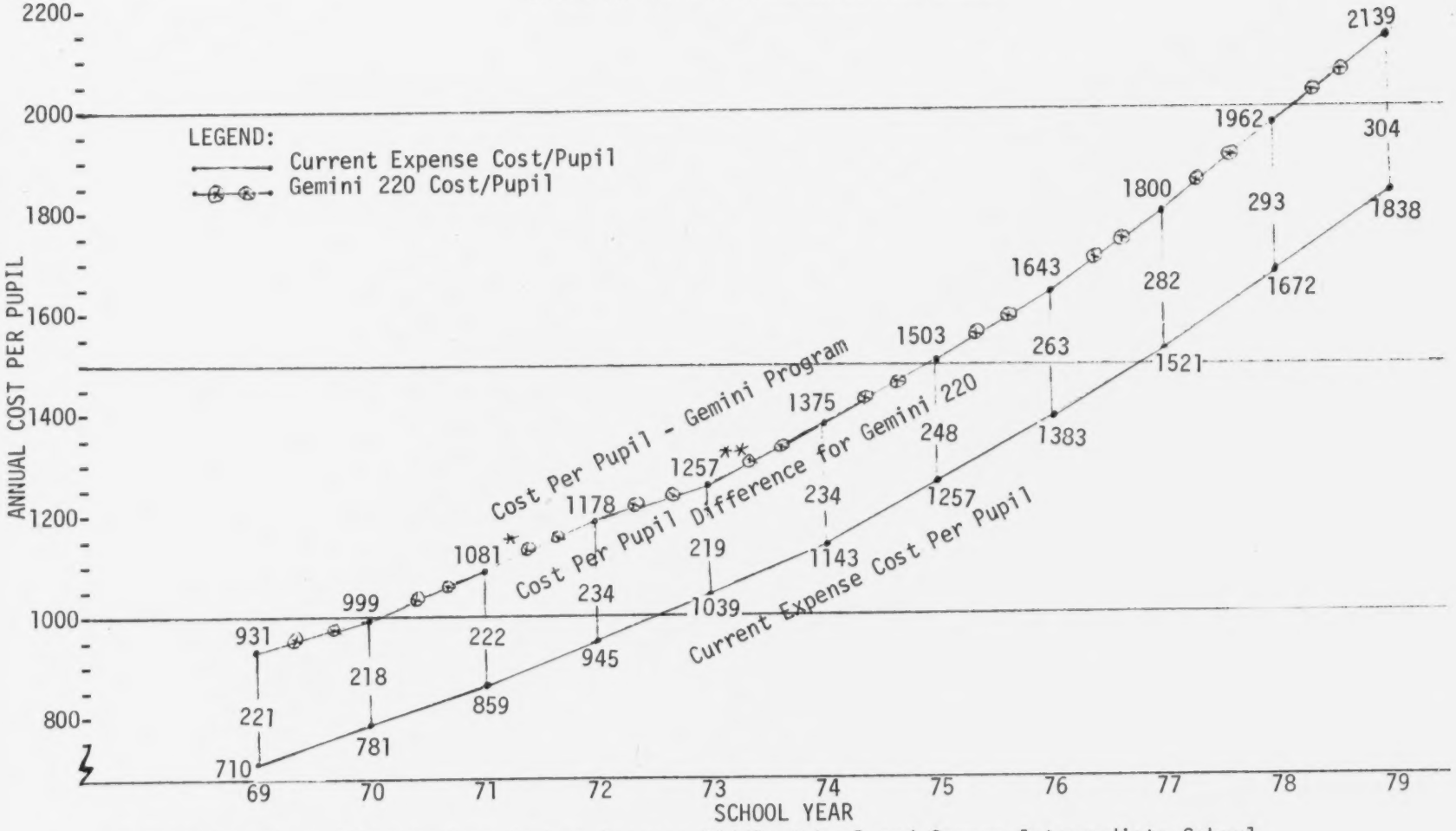
The implementation of Gemini 220 would require increases in the operational budget of 22.6 per cent for instruction, 238.0 per cent for transportation and 32.0 per cent for the operation and maintenance of plant. It was estimated that a 30 per cent increase in the total operational budget for secondary schools would be necessitated by the implementation of Gemini 220.

A comparative summary of costs by budget classification is reported in the Appendix B. The budget classifications were analyzed for each school facility which would eventually incorporate the Gemini Concept. The rationale for each budget estimate is given with a comparison of current educational expenses for each building.

This section presented an analysis of the costs for implementing Gemini 220 into the North Allegheny School District and projected the costs over the next ten years. It also compared the costs for Gemini with

FIGURE 8

PROJECTED COMPARISON OF CURRENT EXPENSE COST PER PUPIL
AND COST PER PUPIL UNDER THE GEMINI PROPOSAL
BASED ON 1969-1970 SALARIES AND COSTS



* Year Gemini would be implemented at Ingomar Middle School and Carson Intermediate School
**Year Gemini would be implemented in all Secondary Schools

the current expenses for the regular school program which is in existence. The following section deals with the cost comparison between Gemini 220 and the cost for new construction.

III. COST COMPARISON BETWEEN GEMINI 220 AND NEW CONSTRUCTION

In the preceding section the estimated cost of the Gemini Program was determined. Total cost and per pupil cost comparisons were made between the current educational program and the proposed Gemini Program. The estimated per pupil cost for Gemini and the current educational program was projected and prepared for ten years henceforth. This section deals with the determination of the annual rental payments for the construction of a new secondary terminal unit. The estimated per pupil cost for new construction is compared with the estimated per pupil cost for the proposed Gemini Program.

A preliminary room schedule for 1993 eleventh and twelfth grade students was approved by the Department of Education on March 3, 1969. The average cost per pupil for new secondary construction in Allegheny County is in excess of $5000.00. Therefore, the cost for the construction for a new terminal unit was estimated to be approximately $10,000,000.

Based on past patterns of rental payments in the North Allegheny School District and recommendations from bond counsel, a thirty-four annual equal lease payment pattern was accepted for the computations herein. (Thirty-four equal interest payments and thirty-five payments to retire the principal). Bond counsel further suggested that a 7 per cent annual interest rate be utilized in calculating the total annual rental payment. Using the scale in Appendix C, the lease payment for new construction was estimated to be $904,000 annually.

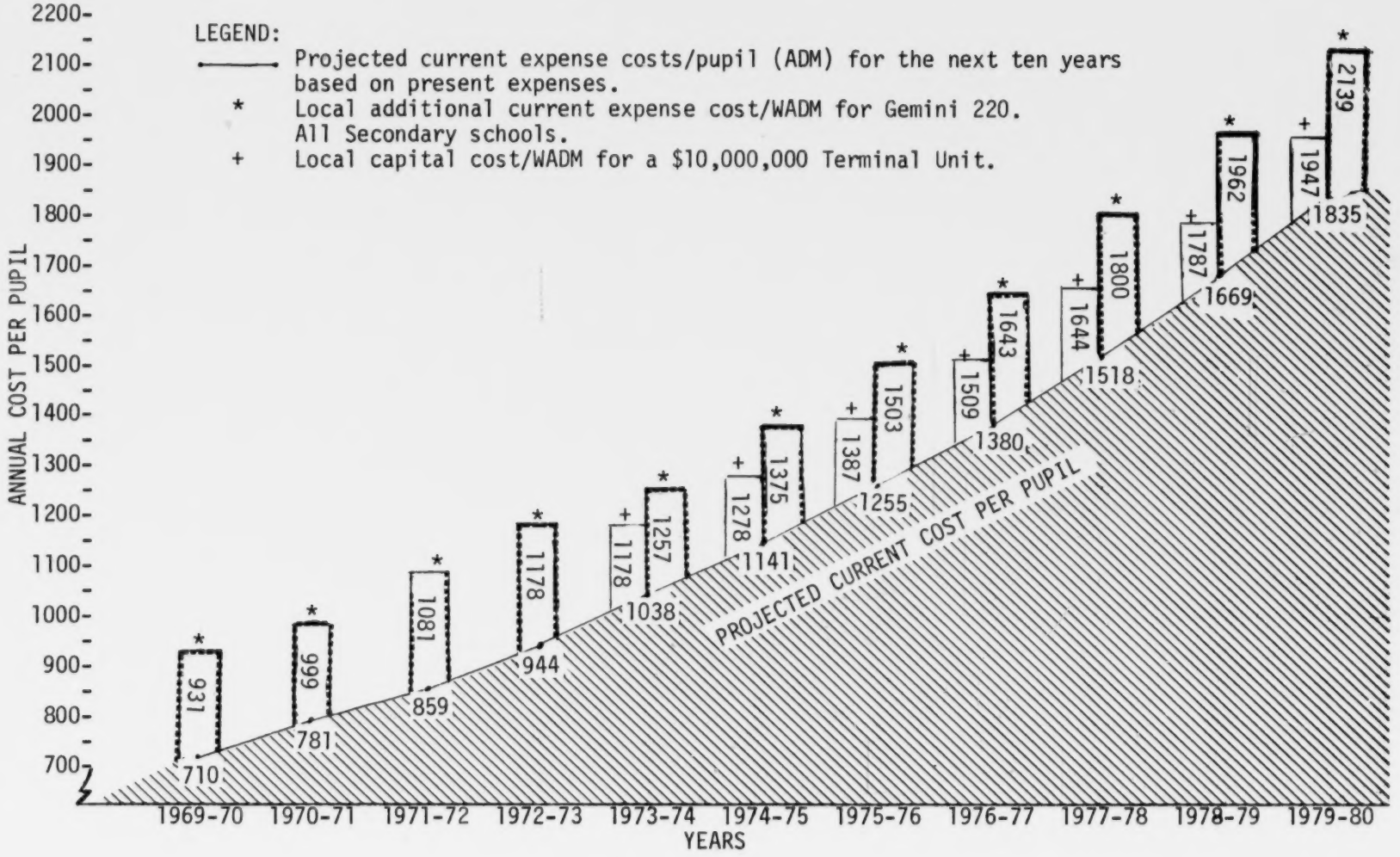
The local capital cost for the terminal unit was calculated by reducing the annual lease payment by the amount which would be state reimbursable. The state reimbursable amount (according to the reimbursement on the most recent secondary construction in North Allegheny) would be approximately 27 per cent of the total annual rental payment. The annual rental payment less the state reimbursement would be the local capital costs. The local capital cost for the annual rental for new construction was divided by the projected enrollment of students expected in 1973 and 1974. The local cost per pupil for new construction in 1973 and 1974 was estimated to be $140.00. The local cost per pupil for the next ten years was extrapolated from the computed local cost per pupil for 1973-74. By 1979 and 1980 the local cost for new construction was determined to be $112.00 per pupil.

The Gemini expense cost per pupil is compared with the local capital cost for new construction in Figure 9. In 1973-74, the year when the new terminal unit is scheduled to open the total cost per pupil would be $1178.00. This cost reflects the projected regular current expense cost per pupil of $1038.00 plus $140.00 per pupil for new construction. In contrast for the same school year, the projected regular current expense cost per pupil of $1038.00 plus $219.00 for additional operating costs for the Gemini Program would result in $1257.00 per pupil.

In sum it would cost approximately $79.00 more to educate a student under the Gemini Program than to complete a new terminal unit in 1973-74, and by 1979-80 the cost difference per pupil between Gemini and new construction would escalate to $192.00 more for the Gemini Program. Also, a study of projected enrollments reveals that Gemini Program would be inoperable by the late seventies. Thus, The Gemini Program which embraces

FIGURE 9

GEMINI CURRENT EXPENSE COSTS COMPARED WITH CAPITAL COSTS
FOR A NEW SECONDARY SCHOOL, GRADES 11-12



an extended school day and calendar concept is educationally and financially undesirable as an alternative to new construction in the seventies for the North Allegheny School District.

IV. SUMMARY

A. Conclusions

The purpose of this research investigation was to determine whether a student daily schedule and school calendar could be designed to maximize the utilization of existing facilities in the North Allegheny School District for the years ahead and to determine if the implementation of such designs would be financially feasible as an alternative to new construction. When the findings from the research were analyzed, certain conclusions regarding the extended school day and/or year concept as an alternative to new construction emerged.

The following conclusions were drawn from the findings of this research investigation:

1. There has been a wide interest in year-round schools and extended school terms since the beginning of the twentieth century and this interest is increasing.
2. Both the lay public and professional educators are questioning the wisdom of operating schools for only 175 or 180 days per year.
3. Expressed interest in the extended school calendar has grown for a variety of reasons. Some have seen the extended school year concept as a means of enriching and improving curriculum while others have perceived the extended school year concept as an economic measure for meeting increased enrollments or maximizing the use of educational facilities.
4. Some extended school designs (schedules and calendars) have the potential of maximizing the use of existing educational facilities.

However, no plan of staggering the school term (part of the children are on vacation all of the time and part in school all of the time) will save money. Plans of this type also encounter strenuous paternal opposition and involve school authorities in enormous administrative difficulties. Where such plans have been tried, research bears out that they have been abandoned.

5. The only feasible year-round school plans yet developed for reducing school costs involve all of the pupils attending school for an extended school year and the acceleration of pupils in order to reduce enrollment. These cost savings are not immediate and only occur after the program has been in operation for eight to ten years.

6. The extended school year concept will not solve a district's building problems unless the district is static or growing so slowly as not to constitute a problem. At best, the extended school year concept only offers a temporary relief in a growing school system. The North Allegheny School District is indeed a rapidly growing school district and can only expect the extended school year concept to provide a delay in school construction rather than to eliminate it. As an alternative to new construction in the North Allegheny School District, it appears that the implementation of the extended school year concept as Gemini 220 would only be a stopgap measure until the end of the seventies.

7. This research has produced evidence that the most promising extended school year design, Gemini 220, would be a more expensive venture in regard to additional per pupil cost than the construction of a new facility. In the long run, it appears that the extended school year

concept would not provide the additional student space which will be needed, nor would it be financially feasible to implement it in the North Allegheny School District.

8. The extended day and/or year concept would merit a great deal of consideration by the Board of Education, if their concern in these concepts was the improvement of the quality of education and the provision of additional educational opportunities to all pupils without the primary concern for economy.

9. Finally, it appears as a result of this study, the decision of accepting the extended school concept as an alternative to new construction will have to be made on a basis other than maximizing the use of school facilities or economizing on the taxpayers' dollar.

With public funds as difficult to secure as they are, it is proper that due consideration has been given to saving building construction dollars and other dollars whenever possible.

It is quite proper also, that the final decision on the extended school year concept be made by the Board of Education on the basis of providing the best possible education which the North Allegheny School District can offer for its youth.

B. Recommendations

In light of this research, the best possible education for the youth of North Allegheny under the present financial circumstances, can be offered through the Board's careful consideration and approval of the recommendations presented below:

1. The need for immediate consideration of secondary school construction for the decade ahead.
2. Before the end of 1969, establish a timetable for future secondary construction and its completion date.
3. Promptly schedule a meeting with the architect to discuss the preliminary room schedule for a new senior high school, which was approved by the Department of Education on March 3, 1969.
4. Proceed with promptness and dispatch to complete the construction on the new senior high school by September 1973.

THESE RECOMMENDATIONS WERE OFFICIALLY ACCEPTED AND APPROVED BY THE NORTH ALLEGHENY BOARD OF EDUCATION AT THE REGULARLY SCHEDULED BOARD MEETING OF DECEMBER 9, 1969.

APPENDIX A
Exhibit 1

SURVEY OF RESIDENTS FEELINGS TOWARD VARIOUS DAILY SCHOOL SCHEDULES AND CALENDAR

SCHEDULE/ CALENDAR	Percentage			
	Favorable	No Objection	Unfavorable	Total
HALF DAY	27	49	24	100
REGULAR	98	2	-	100
STAGGERED	33	44	23	100
COLLEGE TYPE (Classes offered in morning, afternoon and evening)	22	53	25	100
GEMINI PLAN	16	45	35	100
QUARTER PLAN	10	28	62	100

N = 32

APPENDIX A
Exhibit 2

SURVEY OF STUDENTS FEELINGS TOWARD VARIOUS DAILY
SCHOOL SCHEDULES AND CALENDAR

SCHEDULE/ CALENDAR	Percentage			
	Favorable	No objection	Unfavorable	Total
HALF DAY	91	8	1	100
REGULAR	79	18	3	100
STAGGERED	25	60	15	100
COLLEGE TYPE (Classes offered in morning, afternoon and evening)	35	55	10	100
GEMINI PLAN	1	4	95	100
QUARTER PLAN	0	3	97	100

N = 50

APPENDIX A
Exhibit 3

SURVEY OF PROFESSIONAL EMPLOYEES FEELINGS TOWARD
VARIOUS DAILY SCHOOL SCHEDULES AND CALENDAR

SCHEDULE/ CALENDAR	Percentage			
	Favorable	No Objection	Unfavorable	Total
HALF DAY	60	27	13	100
REGULAR	80	14	6	100
STAGGERED	43	49	8	100
COLLEGE TYPE (Classes offered in morning, afternoon and evening)	25	40	35	100
GEMINI PLAN	33	21	46	100
QUARTER PLAN	29	33	38	100

N = 30

APPENDIX B
Exhibit 1

A COMPARATIVE SUMMARY OF COSTS ANALYZED BY BUDGET CLASSIFICATION
BETWEEN THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0200	INSTRUCTION	$ 529,076	$ 656,636	$ 127,560	25.81%
0300	PUPIL PERSONNEL SERVICES	29,842	44,776	14,935	50.04
0400	HEALTH SERVICES	10,650	16,110	5,460	51.00
0500	PUPIL TRANSPORTATION SERVICES	33,683	114,818	81,148	240.87
0600	OPERATION/MAINTENANCE OF PLANT	65,142	85,644	20,502	31.47
0800	FIXED CHARGES	---	8,994	8,994	100.00
1300	DEBT SERVICE	---	60,658	60,658	100.00
	TOTAL	$ 668,393	$ 987,636	$ 319,257*	

* $319,257 INCREASE IN COST FOR THE PROPOSED GEMINI PROGRAM REPRESENTS A 47.76 INCREASE IN THOSE FUNCTIONS INCLUDED IN THE OPERATIONAL BUDGET OVER THE CURRENT EDUCATIONAL PROGRAM AT INGOMAR MIDDLE SCHOOL FOR 1969-1970 SCHOOL YEAR. THIS COST DIFFERENCE AVERAGES $245.58 PER PUPIL.

ANALYSIS OF COSTS FOR INSTRUCTION AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION			CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0200	INSTRUCTION[1]					
0211	SALARIES	(2)	$ 33,229[a]	$ 45,229[a]	$ 12,000	36.11%
0212	SALARIES, INST. SPECIALISTS	(5)	22,140[c]	33,210[a]	11,070	50.00
0213	SALARIES, TEACHERS	(53)	443,847[b]	533,807[e]	89,960	20.26
0214	SALARIES, LIBRARIAN	(1)	12,049[c]	18,114[d]	6,065	50.33
0218	SALARIES, LIB. CLERK	(1)	3,638[c]	4,303[a]	665	18.30
0219	SALARIES, CLERICAL	(3)	14,173[a]	17,973[a]	3,800	26.81
0222& 0250	SUPPLIES, TEXTBOOKS, FILMS		---	4,000	4,000	100.00
	TOTAL		$ 529,076	$ 656,636	$ 127,560*	

1 ALL BASIC SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINTOUT

a 12 MONTH CONTRACT

b 190 DAY CONTRACT (185 STUDENT DAYS + 5 IN-SERVICE DAYS)

c 190 DAY CONTRACT (PLUS 20 ADDITIONAL DAY CONTRACT - 210 DAYS)

d 12 MONTH CONTRACT FOR SERVICES OF 1.5 LIBRARIANS DUE TO EXTENDED SCHOOL DAY

e 225 DAY CONTRACT (220 STUDENT DAYS + 5 IN-SERVICE DAYS (PRORATED ON CURRENT PER DIEM SALARY)

ie) A. $\frac{\text{190 DAY CONTRACT SALARY}}{\text{190 DAYS}}$ = SALARY/DAY

B. SALARY/DAY X 225 DAYS = SALARY FOR 225 DAY CONTRACT

C. 53 PROFESSIONAL EMPLOYEES X 225 DAY CONTRACT = $533,807

D. $3,400 FOR ADDITIONAL PART TIME ART TEACHER + $3,400 FOR ADDITIONAL MUSIC TEACHER

* $127,560 INCREASE IN COST FOR INSTRUCTION UNDER THE PROPOSED GEMINI PROGRAM REPRESENTS 25.81 INCREASE IN COST OVER THE CURRENT EDUCATIONAL PROGRAM AT INGOMAR MIDDLE SCHOOL FOR 1969-1970. THIS COST DIFFERENCE AVERAGES $98.12 PER PUPIL.

ANALYSIS OF COSTS FOR PUPIL PERSONNEL SERVICES AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM AT
INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0300 PUPIL PERSONNEL SERVICES[1]					
0313 SALARIES, GUIDANCE COUNSELORS	(2)	$ 29,842[c]	$ 34,776[a]	$ 4,935	16.50%
	(1)	---	10,000[a*]	10,000	100.00
TOTAL		$ 29,842	$ 44,776	$ 14,935[**]	

1 ALL BASIC SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINTOUT

a 12 MONTH CONTRACT

c 190 DAY CONTRACT (PLUS 20 ADDITIONAL DAY CONTRACT = 210 DAYS)

a* Additional counselor to provide full service during the extended school day

** Cost difference of $14,935 represents a 50.04% increase over the cost for pupil personnel service under the the current program. This cost difference averages $11.49 per pupil.

ANALYSIS OF COSTS FOR HEALTH SERVICES AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION			CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0400	HEALTH SERVICES[1]					
	0413 NURSE	(1)	$ 10,650[f]	$ 12,610[g]	$1,960	19.00%
		(1/2)	---	3,500[h]	3,500	100.00%
	TOTAL		$ 10,650	$ 16,110	$5,460 *	

1 ALL SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINTOUT

f 190 DAY CONTRACT + $200 SUPPLEMENTAL CONTRACT

g 225 DAY CONTRACT PRORATED ON 190 DAY CONTRACT + $200 SUPPLEMENTAL CONTRACT

h ADDITIONAL PART TIME NURSE TO PROVIDE A FULL DAY OF HEALTH SERVICES UNDER THE GEMINI PROPOSAL - DUE TO EXTENDED SCHOOL DAY

* COST DIFFERENCE OF $5,460 FOR HEALTH SERVICES REPRESENTS 51% INCREASE OVER THE COST FOR CURRENT PROGRAM OR $4.20 PER PUPIL

ANALYSIS OF COSTS FOR PUPIL TRANSPORTATION SERVICES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0500	PUPIL TRANSPORTATION SERVICES[1]				
0511 - 0513	SALARIES	$ 18,525[j]	$ 96,800[l]	$ 78,275	422.50%
0521 - 0539	FUEL, ETC.	15,158[k]	18,018[m]	2,873	18.97
	TOTAL	$ 33,683	$114,818	$ 81,148*	

1 ALL COMPUTATIONS WERE MADE WITH THE COUNSEL OF DR. JAMES SNOKE, ASSISTANT SUPERINTENDENT OF ALLEGHENY COUNTY SCHOOLS OCTOBER 31, 1969

COST PER PUPIL FOR TRANSPORTATION DURING A 185 DAY SCHOOL YEAR = $25.81 (SCHOOL BUDGET)
SALARIES REPRESENT 55% or $14.25 of PER PUPIL COST FOR TRANSPORTATION
FUEL AND ALL OTHER ITEMS REPRESENT 45% or $11.66 of PER PUPIL COST FOR TRANSPORTATION

j TOTAL COST FOR SALARIES TO TRANSPORT 1300 7/8 GRADE PUPILS
1300 PUPILS X $14.25 PER PUPIL COST FOR SALARIES = $18,525

k TOTAL COST FOR FUEL, ETC. TO TRANSPORT 1300 7/8 GRADE PUPILS
1300 PUPILS X $11.66 PER PUPIL COST FOR FUEL, ETC. = $15,158

l 20 FULL TIME DRIVERS @ 8 HOURS PER DAY AT $22.00 PER DAY SALARY FOR 220 DAYS = $96,800 FOR SALARIES TO TRANSPORT 1300 7/8 GRADE PUPILS

m $11.66 COST OF FUEL, ETC. FOR 185 STUDENT DAYS = 6.3¢ COST OF FUEL, ETC. PER DAY PER PUPIL

6.3¢ PER DAY FOR FUEL TO TRANSPORT EACH PUPIL X 1300 PUPILS X 220 DAYS = $18,018

* Cost difference of $81,148 for transportation services represents a 240.87% increase over the costs for the current program or $62.41 per pupil.

ANALYSIS OF COSTS FOR OPERATION AND MAINTENANCE OF PLANT
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0600	OPERATION AND MAINTENANCE OF PLANT[1]				
0612	SALARIES, OPERATION & MAINTENANCE	$ 39,802[n]	$ 55,620[o]	$ 15,818	39.74%
0621	SUPPLIES	7,340	8,074[p]	734	10.00
0622	FUEL	8,000	9,750	1,750[q]	21.87
0631	UTILITIES	10,000	12,200	2,200[q]	22.00
	TOTAL	$ 65,142	$ 85,644	$ 20,502*	

1 LINTON, JAMES, "EXPANSION OF SCHOOL PROGRAM AT INGOMAR MIDDLE SCHOOL," TYPEWRITTEN MEMO, NORTH ALLEGHENY SCHOOLS: OCTOBER 23, 1969

n INCLUDES SALARIES OF ONE HEAD CUSTODIAN, ONE MATRON, FOUR FULL TIME NIGHT CUSTODIANS, AND ONE PART TIME (3 HOURS/NIGHT) CUSTODIAN

o INCLUDES ALL MENTIONED ABOVE WITH A FULL TIME NIGHT CUSTODIAN TO REPLACE THE PART TIME NIGHT CUSTODIAN. TWO OF THESE NIGHT CUSTODIANS WOULD BE EMPLOYED FOR THE PURPOSE OF GENERAL HOUSECLEANING WHICH NORMALLY WOULD BE COMPLETED IN THE SUMMER MONTHS

p ESTIMATED 10% INCREASE IN SUPPLIES AND MATERIALS DUE TO CLEANING DURING THE ADDITIONAL 35 DAYS OF THE EXTENDED SCHOOL YEAR

q ESTIMATED 22% INCREASE IN FUEL AND UTILITIES DUE TO A LONGER SCHOOL DAY AND AN EXTENDED SCHOOL YEAR. AIR CONDITIONING WOULD UTILIZE A MAJOR PORTION OF THE ADDITIONAL ENERGY

* $20,502 INCREASE IN COST REPRESENTS A 31.47% INCREASE OVER THE COST FOR THE CURRENT PROGRAM
THIS COST DIFFERENCE AVERAGES $15.77 PER PUPIL

ANALYSIS OF COSTS FOR FIXED CHARGES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM
AND THE CURRENT EDUCATIONAL PROGRAM
AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0800 FIXED CHARGES[1]	---	$ 8,994	$ 8,994	100.00%

1 MR. GEORGE VARNUM, BUSINESS MANAGER, CALCULATED THE COST OF RETIREMENT, HOSPITALIZATION, SOCIAL SECURITY, WORKMEN'S COMPENSATION; ETC., FOR 20 FULL TIME BUS DRIVERS AT $8,994. THIS ADDITIONAL COST AVERAGES $6.92 PER PUPIL

ANALYSIS OF COSTS FOR DEBT SERVICE
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM
AND THE CURRENT EDUCATIONAL PROGRAM
AT INGOMAR MIDDLE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM ING. MID. SCH. 1969-1970	PROPOSED GEMINI PROGRAM ING. MID. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
1300 DEBT SERVICE				
1371 AUTHORITY RENTALS, AIR CONDITIONING [1]	---	$ 60,658	$ 60,658*	100.00%

1 Mr. Larry Teppert, Mechanical Engineer of Deeter, Ritchey and Sippel, on October 28, 1969, visited and estimated the need of 300 tons of air conditioning with a maximum rate of 1000/ton to cool the Ingomar Middle School plant thus the estimated cost for air conditioning was computed at $300,000.

Mr. Richard Firsching, mechanical consultant, estimated the cost for air conditioning the North Allegheny High School for classrooms only at $300,000. This would have to be a roof type implementation. Hallways, auditorium, gymnasium and cafeteria would not be easily air conditioned.

In 1966 it was estimated that an additional $57,000 would be required to air condition the Carson Intermediate High School. Since that time costs have risen beyond 25% of that estimate or $72,000; therefore, it seems reasonable to estimate $60,000 to air condition the Carson Intermediate High School.

Therefore, it is estimated that air conditioning would cost $660,000. An interest rate of 7% over 34 years would establish the annual payment of $60,658 for all three secondary school units.

* This cost $60,658 reflects the cost to air condition all secondary schools and will not appear under debt service for the other buildings.

This additional cost would average $46.67 per pupil.

APPENDIX B
Exhibit 2

A COMPARATIVE SUMMARY OF COSTS ANALYZED BY BUDGET CLASSIFICATION
BETWEEN THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0200 INSTRUCTION	$619,123	$751,353	$132,230	21.34%
0300 PUPIL PERSONNEL SERVICES	29,676	44,622	14,946	50.03
0400 HEALTH SERVICES	7,099	11,906	4,807	67.71
0500 PUPIL TRANSPORTATION SERVICES	33,683	100,298	66,628	235.83
0600 OPERATION/MAINTENANCE OF PLANT	90,302	120,192	29,890	33.12
0800 FIXED CHARGES		7,800	7,800	100.00
1300 DEBT SERVICE	--	--	--	--
TOTAL	$779,883	$1,036,171	$256,301*	

* $256,301 INCREASE IN COST FOR THE PROPOSED GEMINI PROGRAM REPRESENTS A 25.50% INCREASE IN THOSE FUNCTIONS INCLUDED IN THE OPERATIONAL BUDGET OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970 SCHOOL YEAR. THIS COST DIFFERENCE AVERAGES $197.00 PER PUPIL

ANALYSIS OF COSTS FOR INSTRUCTION AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0200 INSTRUCTION[1]				
0211 SALARIES, PRINCIPALS	$ 30,249[a]	$ 42,249[a]	$ 12,000	39.60
0212 SALARIES, (INST. SPECIALIST)	22,140[c]	22,140[a]		
0213 SALARIES, TEACHERS	539,146[b]	645,242[e]	106,096	19.41
0214 SALARIES, LIBRARIAN	8,557[c]	13,657[d]	5,100	59.60
0218 SALARIES (LIBRARY CLERK)	4,358[c]	5,084[a]	726	16.68
0219 SALARIES, CLERICAL	14,673[a]	18,473[a]	3,800	25.83
0222) SUPPLIES, TEXTBOOKS 0250) AND FILMS	--	4,500	4,500	--
TOTAL	$619,123	$751,353	$132,230*	

1 ALL BASIC SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINT OUT

a 12 MONTH CONTRACT

b 190 DAY CONTRACT (185 STUDENT DAYS + 5 IN SERVICE DAYS)

c 190 DAY CONTRACT (PLUS 20 ADDITIONAL DAY CONTRACT = 210 DAYS)

d 12 MONTH CONTRACT FOR SERVICES OF 1.5 LIBRARIANS DUE TO EXTENDED SCHOOL DAY

e 225 DAY CONTRACT (220 STUDENT DAYS + 5 IN SERVICE DAYS) (PRORATED ON CURRENT PER DIEM SALARY)

ie) A. $\frac{\text{190 DAY CONTRACT SALARY}}{\text{190 DAYS}}$ = SALARY/DAY

B. SALARY/DAY X 225 DAYS = SALARY FOR 225 DAY CONTRACT

C. 66 PROFESSIONAL EMPLOYEES X 225 DAY CONTRACT = $645,242

D. $3400 FOR ADDITIONAL PART TIME ART TEACHER + $3400 FOR ADDITIONAL MUSIC TEACHER

*$132,230 INCREASE IN COST FOR INSTRUCTION UNDER THE PROPOSED GEMINI PROGRAM REPRESENTS 21.34% INCREASE IN COST OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970. THE COST DIFFERENCE AVERAGES $101.93 PER PUPIL.

ANALYSIS OF COSTS FOR PUPIL PERSONNEL SERVICES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0300 PUPIL PERSONNEL SERVICES[1]				
0313 SALARIES, GUIDANCE COUNSELORS (2)	$ 29,676[c]	$ 34,622[a]	$ 4,946	16.67
(1)	---	10,000[a*]	10,000	100.00
TOTAL	$ 29,676	$ 44,622	$14,946**	

1 ALL BASIC SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969,PAYROLL PRINT OUT

a 12 MONTH CONTRACT

c 190 DAY CONTRACT (PLUS 20 ADDITIONAL DAY CONTRACT = 210 DAYS)

a* ADDITIONAL COUNSELOR TO PROVIDE FULL SERVICE DURING THE EXTENDED SCHOOL DAY

**$14,946 INCREASE IN COST FOR INSTRUCTION UNDER THE PROPOSED GEMINI PROGRAM REPRESENTS 50.03% INCREASE IN COST OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970. THE COST DIFFERENCE AVERAGES $11.64 PER PUPIL

ANALYSIS OF COSTS FOR HEALTH SERVICES AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0400 HEALTH SERVICES[1]					
0413 NURSE	(1)	$ 7,099[f]	$ 8,406[g]	1,307	18.43%
	(1/2)	---	3,500[h]	3,500	100.00
TOTAL		$ 7,099	$11,906	$4,807*	

1 ALL SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINT OUT

f 190 DAY CONTRACT + $200 SUPPLEMENTAL CONTRACT

g 225 DAY CONTRACT PRORATED ON 190 DAY CONTRACT + $200 SUPPLEMENTAL CONTRACT

h ADDITIONAL PART TIME NURSE TO PROVIDE A FULL DAY OF HEALTH SERVICES UNDER THE GEMINI PROPOSAL - DUE TO EXTENDED SCHOOL DAY

*$4,807 INCREASE IN COST FOR INSTRUCTION UNDER THE PROPOSED GEMINI PROGRAM REPRESENTS 67.71% INCREASE IN COST OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970. THE COST DIFFERENCE AVERAGES $3.90 PER PUPIL.

ANALYSIS OF COSTS FOR PUPIL TRANSPORTATION SERVICES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0500	PUPIL TRANSPORTATION SERVICES[1]				
0511-0513	SALARIES	$18,525[j]	$ 82,280[l]	$63,755	344.10
0521-0539	FUEL, ETC.	15,158[k]	18,018[m]	2,873	18.97
	TOTAL	$33,683	$100,298	$66,628*	

1 ALL COMPUTATIONS WERE MADE WITH THE COUNSEL OF DR. JAMES SNOKE, ASSISTANT SUPERINTENDENT OF ALLEGHENY COUNTY SCHOOLS OCTOBER 31, 1969

COST PER PUPIL FOR TRANSPORTATION DURING A 185 DAY SCHOOL YEAR= $25.81 (SCHOOL BUDGET)
SALARIES REPRESENT 55% or $14.25 OF PER PUPIL COST FOR TRANSPORTATION
FUEL AND ALL OTHER ITEMS REPRESENT 45% OR $11.66 OF PER PUPIL COST FOR TRANSPORTATION

j TOTAL COST FOR SALARIES TO TRANSPORT 1300 9/10 GRADE PUPILS
1300 PUPILS x $14.25 PER PUPIL COST FOR SALARIES = $18,525

k TOTAL COST FOR FUEL, ETC. TO TRANSPORT 1300 9/10 GRADE PUPILS
1300 PUPILS X $11.66 PER PUPIL COST FOR FUEL, ETC. = $15,518

l 17 FULL TIME DRIVERS @ 8 HOUR PER DAY AT $22.00 PER DAY SALARY FOR 220 DAYS = $82,280 FOR SALARIES TO TRANSPORT 1300 9/10 GRADE PUPILS

m $11.66 COST OF FUEL, ETC. FOR 185 STUDENT DAYS = 6.3¢ COST OF FUEL, ETC. PER DAY PER PUPIL
6.3¢ PER DAY FOR FUEL TO TRANSPORT EACH PUPIL X 1300 PUPILS x 220 DAYS = $18,018

* $66,628 INCREASE IN COST FOR INSTRUCTION UNDER THE PROPOSED GEMINI PROGRAM REPRESENTS 235.83% INCREASE IN COST OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970. THE COST DIFFERENCE AVERAGES $51.32 PER PUPIL

ANALYSIS OF COSTS FOR OPERATION AND MAINTENANCE OF PLANT
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0600	OPERATION AND MAINTENANCE OF PLANT[1]				
0612	SALARIES, OPERATION AND MAINTENANCE	$ 52,202[n]	$ 74,702[o]	$ 22,500	43.10%
0621	SUPPLIES	9,100	10,010[p]	910	10.00
0622	FUEL	10,000	12,300	2,300[q]	22.00
0631	UTILITIES	19,000	23,180	4,180[q]	22.00
	TOTAL	$ 90,302	$120,192	$ 29,890*	

1 LINTON, JAMES, "EXPANSION OF SCHOOL PROGRAM AT CARSON INTERMEDIATE SCHOOL," TYPEWRITTEN MEMO, NORTH ALLEGHENY SCHOOLS: OCTOBER 23, 1969.

n INCLUDES SALARIES OF 1 HEAD CUSTODIAN, 1 MATRON, 6 FULL TIME NIGHT CUSTODIANS

o INCLUDES ALL MENTIONED ABOVE WITH AN ADDITION OF 3 FULL TIME NIGHT CUSTODIANS FOR THE PURPOSE OF GENERAL HOUSECLEANING WHICH NORMALLY WOULD BE COMPLETED IN THE SUMMER MONTHS

p ESTIMATED 10% INCREASE IN SUPPLIES AND MATERIALS DUE TO CLEANING DURING THE ADDITIONAL 35 DAYS OF THE EXTENDED SCHOOL YEAR

q ESTIMATED 22% INCREASE IN FUEL AND UTILITIES DUE TO A LONGER SCHOOL DAY AND AN EXTENDED SCHOOL YEAR. AIR CONDITIONING WOULD UTILIZE A MAJOR PORTION OF THE ADDITIONAL ENERGY

* $29,890 INCREASE IN COST FOR THE PROPOSED GEMINI PROGRAM REPRESENTS A 33.12% INCREASE IN THOSE FUNCTIONS INCLUDED IN THE OPERATIONAL BUDGET OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970 SCHOOL YEAR. THIS COST DIFFERENCE AVERAGES $22.12 PER PUPIL.

ANALYSIS OF COSTS FOR FIXED CHARGES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0800 FIXED CHARGES[1]		$ 7,800	$ 7,800	100.00

1 COST INCURRED BY EMPLOYING BUS DRIVERS ON FULL TIME BASIS - (RETIREMENT, SOCIAL SECURITY, HOSPITALIZATION, ETC.)

$7800 INCREASE IN COST FOR THE PROPOSED GEMINI PROGRAM REPRESENTS A 100% INCREASE IN THOSE FUNCTIONS INCLUDED IN THE OPERATIONAL BUDGET OVER THE CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR 1969-1970 SCHOOL YEAR. THIS COST DIFFERENCE AVERAGES $6.00 PER PUPIL

ANALYSIS OF COSTS FOR DEBT SERVICE
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT CARSON INTERMEDIATE SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM CARSON INT. SCH. 1969-1970	PROPOSED GEMINI PROGRAM CARSON INT. SCH. 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
1300 DEBT SERVICE[1]				
1371 AUTHORITY RENTAL, AIR CONDITIONING	INCLUDED IN DEBT SERVICE CALCULATED FOR INGOMAR MIDDLE SCHOOL			

APPENDIX B
Exhibit 3

A COMPARATIVE SUMMARY OF COSTS ANALYZED BY BUDGET CLASSIFICATION
BETWEEN THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT NORTH ALLEGHENY HIGH SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0200	INSTRUCTION	$ 641,469	$ 777,235	$ 135,766	21.16%
0300	PUPIL PERSONNEL SERVICES	28,073	42,751	14,678	52.21
0400	HEALTH SERVICES	10,800	16,235	5,435	50.30
0500	PUPIL TRANSPORTATION SERVICES	31,092	16,632	(-14,460)	-50.00
0600	OPERATION/MAINTENANCE OF PLANT	95,920	130,645	34,125	36.18
0800	FIXED CHARGES	---	---	---	---
1300	DEBT SERVICE	---	---	---	---
	TOTAL	$ 807,354	$ 967,263	$ 159,909*	

* $159,909 INCREASE IN COST FOR THE PROPOSED GEMINI PROGRAM REPRESENTS A $19.85 INCREASE IN THOSE FUNCTIONS INCLUDED IN THE OPERATIONAL BUDGET OVER THE CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY HIGH SCHOOL FOR THE 1969-1970 SCHOOL YEAR. THIS COST DIFFERENCE AVERAGES $128.00 PER PUPIL.

ANALYSIS OF COSTS FOR INSTRUCTION AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT NORTH ALLEGHENY HIGH SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0200	INSTRUCTION[1]				
0211	SALARIES, PRINCIPALS	$ 33,819[a]	$ 45,819[a]	$ 12,000	35.40%
0212	SALARIES, INST. SPECIALISTS	22,140[c]	22,140[a]	---	---
0213	SALARIES, TEACHERS	552,009[b]	660,461[e]	108,452	19.63
0214	SALARIES, LIBRARIAN	12,799[c]	18,430[d]	5,631	47.22
0218	SALARIES, LIB. CLERK	5,318[c]	6,201[a]	883	16.66
0219	SALARIES, CLERICAL	15,384[a]	19,184[a]	3,800	24.70
0222& 0250	SUPPLIES, TEXTBOOKS, FILMS	---	5,000	5,000	100.00
	TOTAL	$ 641,469	$ 777,235	$ 135,766*	

1 ALL BASIC SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINTOUT

a 12 MONTH CONTRACT

b 190 DAY CONTRACT (185 STUDENT DAYS + 5 IN-SERVICE DAYS)

c 190 DAY CONTRACT (PLUS 20 ADDITIONAL DAY CONTRACT = 210 DAYS)

d 12 MONTH CONTRACT FOR SERVICES OF 1.5 LIBRARIANS DUE TO EXTENDED SCHOOL DAY

e 225 DAY CONTRACT (220 STUDENT DAYS + 5 IN-SERVICE DAYS) (PRORATED ON CURRENT PER DIEM SALARY)

ie)A. $\frac{\text{190 DAY CONTRACT SALARY}}{\text{190 DAYS}}$ = SALARY/DAY

B. SALARY/DAY X 225 DAYS = SALARY FOR 225 DAY CONTRACT

C. 67 PROFESSIONAL EMPLOYEES X 225 DAY CONTRACT = $660,461

D. $3,400 FOR ADDITIONAL PART TIME ART TEACHER + $3,400 FOR ADDITIONAL MUSIC TEACHER

* $135,766 INCREASE IN COST FOR INSTRUCTION UNDER THE PROPOSED GEMINI PROGRAM REPRESENTS 21.16 INCREASE IN COST OVER THE CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY HIGH SCHOOL FOR 1969-1970. THIS COST DIFFERENCE AVERAGES $109.60 per PUPIL.

ANALYSIS OF COSTS FOR PUPIL PERSONNEL SERVICES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0300 PUPIL PERSONNEL SERVICES[1]				
0313 SALARIES, GUIDANCE COUNSELORS (2)	$ 28,073[c]	$ 32,751[a]	$ 4,678	16.56%
(1)	---	10,000[a*]	10,000	100.00
TOTAL	$ 28,073	$ 42,751	$ 14,678*	

1 ALL BASIC SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINTOUT

a 12 MONTH CONTRACT

c 190 DAY CONTRACT (PLUS 20 ADDITIONAL DAY CONTRACT = 210 DAYS)

a* ADDITIONAL COUNSELOR TO PROVIDE FULL SERVICE DURING THE EXTENDED SCHOOL DAY

* COST DIFFERENCE OF $14,678 REPRESENTS 52.21% INCREASE OVER THE COST FOR PUPIL PERSONNEL SERVICE UNDER THE CURRENT PROGRAM. THIS COST DIFFERENCE AVERAGES $11.10 PER PUPIL.

ANALYSIS OF COSTS FOR HEALTH SERVICES AS COMPARED FOR
THE PROPOSED GEMINI PROGRAM AND THE CURRENT EDUCATIONAL PROGRAM
AT NORTH ALLEGHENY SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0400 HEALTH SERVICES[1]		$ 10,800[f]	$12,735[g]	$1,935	19.00%
0413	(1)				
	(1/2)	---	3,500[h]	3,500	100.00%
TOTAL		$ 10,800	$16,235	$5,435*	

1 ALL SALARIES UTILIZED IN COMPUTING PRORATED SALARIES FOR PROPOSED GEMINI PROGRAM WERE OBTAINED FROM THE OCTOBER, 1969, PAYROLL PRINT OUT

f 190 DAY CONTRACT + $200 SUPPLEMENTAL CONTRACT

g 225 DAY CONTRACT PRORATED ON 190 DAY CONTRACT + $200 SUPPLEMENTAL CONTRACT

h ADDITIONAL PART TIME NURSE TO PROVIDE A FULL DAY OF HEALTH SERVICES UNDER THE GEMINI PROPOSAL - DUE TO EXTENDED SCHOOL DAY

* COST DIFFERENCE OF $5,435 REPRESENTS A 50.30% INCREASE OVER THE COST FOR HEALTH SERVICES UNDER THE CURRENT PROGRAM. THIS COST DIFFERENCE AVERAGES $4.47 PER PUPIL

ANALYSIS OF COSTS FOR PUPIL TRANSPORTATION SERVICES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0500	PUPIL TRANSPORTATION SERVICES*				
0511-0513	SALARIES	$ 17,100	--	($17,100)	(100.00%)
0521-0539	FUEL, ETC.	13,992	$16,632	2,640	18.8%
	TOTAL	$ 31,092	$16,632	($14,460)	

*ALL COMPUTATIONS WERE MADE WITH THE COUNSEL OF DR. JAMES SNOKE, ASSISTANT SUPERINTENDENT OF ALLEGHENY COUNTY SCHOOLS OCTOBER 31, 1969.

BY THE TIME GEMINI WOULD BE IMPLEMENTED AT NORTH ALLEGHENY (1973-74) ALL BUS DRIVERS WILL HAVE BEEN ON FULL TIME EMPLOYMENT. THE COST OF TRANSFERRING ALL 37 PART TIME BUS DRIVERS TO FULL TIME WERE CALCULATED IN THE INGOMAR AND CARSON FIGURES. THUS, THE COST FOR TRANSPORTATION SERVICES FOR NORTH ALLEGHENY WILL NOT REFLECT THE LARGE INCREASES AS WERE GENERATED WITH THE INCEPTION OF THE GEMINI PROPOSAL.

SHOWS OVERALL DECREASE OF $11.84 PER PUPIL

ANALYSIS OF COSTS FOR OPERATION AND MAINTENANCE OF PLANT
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION		CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0600	OPERATION AND MAINTENANCE OF PLANT[1]				
0612	SALARIES, OPERATION & MAINTENANCE	$ 55,420[n]	$ 81,855[o]	$ 26,435	47.63%
0621	SUPPLIES	11,000	12,100[p]	1,100	10.00
0622	FUEL	10,000	12,300	2,300[q]	22.00
0631	UTILITIES	19,500	23,790	4,290[q]	22.00
	TOTAL	$ 95,920	$ 130,645	$ 34,125*	

1 LINTON, JAMES, "EXPANSION OF SCHOOL PROGRAM AT NORTH ALLEGHENY HIGH SCHOOL," TYPEWRITTEN MEMO, NORTH ALLEGHENY SCHOOLS: October 23, 1969

n INCLUDES SALARIES OF 1 HEAD CUSTODIAN, 1 MATRON, 6 FULL TIME NIGHT CUSTODIANS

o INCLUDES ALL MENTIONED ABOVE WITH 3 FULL TIME NIGHT CUSTODIANS FOR THE PURPOSE OF GENERAL HOUSECLEANING WHICH NORMALLY WOULD BE COMPLETED IN THE SUMMER MONTHS

p ESTIMATED 10% INCREASE IN SUPPLIES AND MATERIALS DUE TO CLEANING DURING THE ADDITIONAL 35 DAYS OF THE EXTENDED SCHOOL YEAR

q ESTIMATED 22% INCREASE IN FUEL AND UTILITIES DUE TO A LONGER SCHOOL DAY AND AN EXTENDED SCHOOL YEAR. AIR CONDITIONING WOULD UTILIZE A MAJOR PORTION OF THE ADDITIONAL ENERGY

* $34,125 INCREASE IN COST FOR THE PROPOSED GEMINI PROGRAM REPRESENTS A 36.18% INCREASE IN THOSE FUNCTIONS INCLUDED IN THE OPERATIONAL BUDGET OVER THE CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY HIGH SCHOOL FOR 1969-1970 SCHOOL YEAR. THIS COST DIFFERENCE AVERAGES $27.64 PER PUPIL.

ANALYSIS OF COSTS FOR FIXED CHARGES
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM
AND THE CURRENT EDUCATIONAL PROGRAM AT
NORTH ALLEGHENY SCHOOL FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
0800 FIXED CHARGES*	*NO ADDITIONAL BUS DRIVERS FOR NORTH ALLEGHENY STUDENTS, HAVE BEEN INCLUDED IN THE INGOMAR AND CARSON CALCULATIONS			

ANALYSIS OF COSTS FOR DEBT SERVICE
AS COMPARED FOR THE PROPOSED GEMINI PROGRAM AND THE
CURRENT EDUCATIONAL PROGRAM AT NORTH ALLEGHENY SCHOOL
FOR THE 1969-1970 SCHOOL YEAR

CLASSIFICATION	CURRENT PROGRAM NORTH ALLEGHENY 1969-1970	PROPOSED GEMINI PROGRAM NORTH ALLEGHENY 1969-1970	COST DIFFERENCE	PERCENTAGE DIFFERENCE
1300 DEBT SERVICE*				
1371 AUTHORITY RENTALS AIR CONDITIONING	*INCLUDED IN THE INGOMAR CALCULATIONS			

APPENDIX C

SUMMARY OF AUTHORITY BOND COSTS

IN MILLION DOLLAR INCREMENTS

AUTHORITY BOND ISSUE AMOUNT	ANNUAL LEASE PAYMENT *
$ 1,000,000	$ 90,400
2,000,000	182,800
3,000,000	274,200
4,000,000	361,600
5,000,000	452,000
6,000,000	542,400
7,000,000	632,800
8,000,000	723,200
9,000,000	813,600
**10,000,000	904,000
11,000,000	994,400
12,000,000	1,084,800
13,000,000	1,175,200
14,000,000	1,265,600
15,000,000	1,356,000
16,000,000	1,446,400
17,000,000	1,536,800
18,000,000	1,627,200

*Based on Carson Intermediate High School $4,990,000 issue projected at 7 per cent interest rates (thirty-four annual equal lease payments) and Bond Counsels Recommendations

**Estimated Cost of New Secondary Terminal Unit

FOOTNOTE REFERENCES

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[3]E. B. Sessions, "Maintenance and Operational Costs Involved in a Year-Around Program," Theory Into Practice, I (June, 1962), pp. 148-153.

[4]George I. Thomas, "It's Time to Reschedule the School Year," (Unpublished printout, State Department of Education, New York, May, 1969), p. 5.

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[6]Pennsylvania Department of Public Instruction, Year Around School (Harrisburg, Pa.: Bureau of Administrative Leadership Services, July, 1969), p. 11.

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[8]J. B. White, "Year-Round Schools for Polk County, Florida: A Feasibility Study" (Florida Educational Research and Development Council, University of Florida, 1966), p. 63.

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[12]National Education Association, The Rescheduled School Year (Washington, D. C.,: NEA Research, 1968), pp. 9-15.

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[16]Department of Education, School Administrators' Memo 186, Harrisburg, Pa. (August 15, 1969), p. 5.

[17]Anton Hess, Act 80 - Its Purpose and Implications (Mimeograph), Harrisburg, Pa. (August 26, 1969), p. 3.

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